

Version 5.0 of the common software is expected to be used for most experiments. More recent versions are encouraged where applicable. Availability of the software will be announced on the JCT-VC email reflector by December 20, 2011.

A version 5.1 of the common software will be provided roughly 3 weeks after version 5.0. It will additionally include tools that do not affect common conditions.

The following sections define test sequences, quantization parameter values, encoder configuration files, and compile-time options to be used.

People bringing input contributions should provide a set of results as complete as possible that apply to the proposal. Results should be reported using the attached Excel sheets.

2 Test sequences

Table 1 defines the set of test sequences to be used for intra, random-access, and low-delay conditions. All frames (as defined by frame count in the table) shall be encoded for all sequences and test cases described below (see Section 4 for definitions of HE, LC, and HE10).

Test sequences are available on <ftp://hevc@ftp.tnt.uni-hannover.de/testsequences/> (please contact the JCT-VC chairs for login information).

Table 1 Test sequences

Class	Sequence name	Frame count	Frame rate	Bit depth	Intra	Random access	Low-delay
A	Traffic	150	30fps	8	HE/LC	HE/LC/HE10	
A	PeopleOnStreet	150	30fps	8	HE/LC	HE/LC/HE10	
A	Nebuta	300	60fps	10		HE10	
A	SteamLocomotive	300	60fps	10		HE10	
B	Kimono	240	24fps	8	HE/LC	HE/LC/HE10	HE/LC
B	ParkScene	240	24fps	8	HE/LC	HE/LC/HE10	HE/LC
B	Cactus	500	50fps	8	HE/LC	HE/LC/HE10	HE/LC
B	BQTerrace	600	60fps	8	HE/LC	HE/LC/HE10	HE/LC
B	BasketballDrive	500	50fps	8	HE/LC	HE/LC/HE10	HE/LC
C	RaceHorses	300	30fps	8	HE/LC	HE/LC	HE/LC
C	BQMall	600	60fps	8	HE/LC	HE/LC	HE/LC
C	PartyScene	500	50fps	8	HE/LC	HE/LC	HE/LC
C	BasketballDrill	500	50fps	8	HE/LC	HE/LC	HE/LC
D	RaceHorses	300	30fps	8	HE/LC	HE/LC	HE/LC
D	BQSquare	600	60fps	8	HE/LC	HE/LC	HE/LC
D	BlowingBubbles	500	50fps	8	HE/LC	HE/LC	HE/LC
D	BasketballPass	500	50fps	8	HE/LC	HE/LC	HE/LC
E	Vidyo1	600	60fps	8	HE/LC		HE/LC
E	Vidyo3	600	60fps	8	HE/LC		HE/LC
E	Vidyo4	600	60fps	8	HE/LC		HE/LC

F	BasketballDrillText	500	50fps	8			
F	ChinaSpeed	500	30fps	8			
F	SlideEditing	300	30fps	8			
F	SlideShow	500	20fps	8			

Note: When the encoder operates in 8-bit mode (InternalBitDepth=8) for a 10-bit source, each 10-bit source sample x is converted prior to encoding to an 8-bit value $(x+2) / 4$ clipped to the [0,255] range. Similarly when the encoder operates in 10-bit mode (InternalBitDepth=10) for an 8-bit source, each 8-bit source sample x is converted prior to encoding to a 10-bit value $4*x$. This behavior is built into the reference encoder and no external conversion program is required.

3 Quantization parameter values

For each video sequence four quantization parameter values are to be used: 22, 27, 32 and 37. These values define the QP values used for the I-frames in a sequence (configuration files further define QP values used for other frames).

4 Configuration files

The following sections define encoder configuration files to be used for each test case. Parameters to be changed for each test point are:

- InputFile to reflect the location of the source video sequence on the test system
- FrameRate to reflect the frame rate of a given sequence as per Table 1
- SourceWidth to reflect the width of the source video sequence
- SourceHeight to reflect the height of the source video sequence
- FramesToBeEncoded to reflect the frame count of a given sequence as per Table 1
- IntraPeriod to reflect the intra refresh period in the random access test cases. The intra refresh period is dependent on the frame rate of the source: a value 16 shall be used for sequences with a frame rate equal to 20fps, 24 for 24fps, 32 for 30fps, 48 for 50fps, and 64 for 60fps.
- QP to reflect the quantization parameter values defined in section 3.
- InputBitDepth to reflect the bit depth of a given sequence as per Table 1

These configuration files are provided in the cfg/ folder of version 5.0 of the common software package. There are 12 configurations provided as follows:

- “All Intra – High efficiency” (AI-HE): encoder_intra.cfg
- “Random access – High efficiency” (RA-HE): encoder_randomaccess.cfg
- “Low-delay B – High efficiency” (LB-HE): encoder_lowdelay.cfg
- “Low-delay P – High efficiency” (LP-HE, optional): encoder_lowdelay_P.cfg
- “All Intra – Low complexity” (AI-LC): encoder_intra_loco.cfg
- “Random access – Low complexity” (RA-LC): encoder_randomaccess_loco.cfg
- “Low-delay B – Low complexity” (LB-LC): encoder_lowdelay_loco.cfg
- “Low-delay P – Low complexity” (LP-LC, optional): encoder_lowdelay_P_loco.cfg
- “All Intra – High efficiency” (AI-HE10, optional): encoder_intra_10.cfg

- “Random access – High efficiency” (RA-HE10): encoder_randomaccess_10.cfg
- “Low-delay B – High efficiency” (LB-HE10, optional): encoder_lowdelay_10.cfg
- “Low-delay P – High efficiency” (LP-HE10, optional): encoder_lowdelay_P_10.cfg

Sequence-specific parameters are to be found in the `cfg/per-sequence/` folder.

5 Compile-time settings

Compile-time settings are defined mostly in the `TypeDef.h` file located in the `source/Lib/TLibCommon` folder of the common software. The default settings provided in the source code should be used.